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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,963	08/04/2003	Hyung-Sok Yeo	249/398	4479

27849 7590 05/13/2008

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EXAMINER	
NASSER, ROBERT L	
ART UNIT	PAPER NUMBER
3735	
MAIL DATE	DELIVERY MODE
05/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/632,963	YEO ET AL.	
	Examiner	Art Unit	
	ROBERT L. NASSER	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *9-15 and 22-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 17-20, 29-31* is/are rejected.

7)☒ Claim(s) *7,8,16 and 21* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claims 9-15 and 22-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 9/1/2006.

Claims 1 and 17 are objected to in that it is unclear how the pressure application unit and the light source and detector are always in the same vertical axis. The device may be turned on its side or the finger reoriented, and there would be no vertical axis passing through the source and detector and pressure application unit.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al 6154667 in view of Gavish 4850574. Miura shows a photoplethysmographic probe including a light source unit 5 that is adapted to contact the body (see figure 12) and a photodetector unit 5 facing the light source on the same axis. Since the device is movable any axis can be a vertical axis. Miura et al also shows a body 1 with parallel arms having space for receiving the object, and a pressure application unit, i.e. spring mechanism 10 for applying pressure to the object through the light source/detector.

The pressure application unit is not on a vertical line passing through the source and detector. Gavish teaches a probe wherein the pressure application unit is in the same axis of the source and a detector (figure 1). Since both references teach methods to apply pressure to a digit between parallel arms, they are equivalents. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Miura to include the pressurization unit of Gavish, as it is merely the substitution of one known pressurization means for another. Claim 2 is rejected in that the examiner takes official notice that LEDs are suitable for the purposes of Miura et al. Hence, it would have been obvious to modify Miura to use an LED as it is merely the selection of a well known source for its purposes. Claim 3 is rejected in that the photodetector converts the detected light into a current. Claim 4 is rejected in that the pressurization device is also in the optical axis. Claim 5 is rejected in that the pressurization device of Gavish is a bolt and nut.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al and Gavish as applied to claims 1-5 above, and further in view of Ogawa et al. (US Patent No. 5427093). Ogawa et al. teach the use of a heat-dissipating plate above the light source (figure 1 reference 9). If the heat-dissipating plate is located above the light source and the nut is attached to the light source it is inherent that the plate is between the nut and the light source. It would have been obvious to one of ordinary skill in the art at the time of the present inventor to modify the combination above to include a heat-dissipating plate similar to that of Ogawa et al. in order to prevent a low temperature burn to the patient.

Claims 17-20 and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miura et al3810460 in view of Gavish 4850574 and Hausman et al 4883353. In addition to the features of Miura and Gavish discussed above, Hausman teaches that it is known to display the intensity of the waveforms in a PPG device (see cover figure, for example). Hence, it would have been obvious to modify the combination to display the intensity, as it is merely the choice of a known display technique in the art. Claims 18-20 and 29 are rejected for the reasons given above. Claim 30 is rejected in that the examiner takes official notice that microprocessors are well known to be used as controllers and hence that it would have been obvious to modify the combination to use a microprocessor. Claim 31 is rejected in that in that the examiner takes official notice that it is well known to digitally process the signals and that such requires a a/d converter.

Claims 7, 8, 16, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 7, 8, and 21 define over the art in that none of the art has the claimed elastic member. Claim 16 defines over the art in that none of the art has the pressure application break button.

Applicant's arguments filed 1/15/2008 have been fully considered but they are not persuasive.

Applicant has asserted that Gavish does not disclose a device where the pressure application nit is on a vertical axis passing through the source and detector. The examiner notes that this is only a matter of orientation, and if a patient were lying

on its side, it would meet the claim language. Additionally, Gavish teaches the pressure application in a linear axis with the source and detector, and, as such, it is relevant to the current claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert L. Nasser whose telephone number is 571 272-4731. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert L. Nasser Jr/
Primary Examiner, Art Unit 3735

RLN
April 11, 2008